



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/269,972	04/08/1999	YUKIO NAKAJIMA	Q53854	1844

7590

05/10/2002

SUGHRUE MION ZINN MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 200373202

EXAMINER

GARCIA OTERO, EDUARDO

ART UNIT	PAPER NUMBER
----------	--------------

2123

DATE MAILED: 05/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/269,972

Applicant(s)

NAKAJIMA, YUKIO

Examiner

Eduardo Garcia-Otero

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 08 April 1999 and 18 August 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1,4,5.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 6.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Examined

1. **Claims 1-19 have been submitted, examined, and rejected.**

PCT acknowledged

2. **Acknowledgment is made of applicant's PCT/JP97/02783 filed on 08 August 1997.**

Information Disclosure Statement

3. **The information disclosure statement filed 18 August 1999 is not accompanied by the two documents listed:**

4. "Non-Linear Multi-Variate Analysis-Approach by Neural Network", Hideky Yoyota, p. 11-13 and pp. 162-166, published by Asakura Book Store in 1996; and

5. "Empirical Model-Building and Response Surfaces", Box and Draper, published by John Wiley & Sons, New York.

6. Although this IDS was signed by the previous Examiner, Mr. Richard Pecone, these documents are presently missing from the file. Thus, please provide copies of these two documents with the reply to this office action.

Information Disclosure Statement—37 CFR 1.56 Duty to Disclose

7. 37 CFR 1.56 states "Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section".

8. Please note that the following have been identified by the Examiner as prior art, but were not disclosed by the IDS: Nakajima US Patent 5,617,341 and Nakajima US Patent 5,717,613.

Drawings-replete with prior art

9. **The drawings are replete with figures that should be designated by a legend such as --Prior Art--** because only that which is old is illustrated. See MPEP § 608.02(g). The drawings should be revised carefully in order to comply with MPEP § 608.02(g). Specifically some examples are: FIG 1 is identical to (and appears to be a photocopy of) FIG 1 in Kamegawa et al. US Patent 5,710,718. FIG 2 is a functional diagram of almost every personal computer.
10. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Request for Information

11. **The Examiner requests copies of the following publications** because they appear to be especially germane to the claimed invention. Applicant is reminded of 37 CFR 1.56. In responding to this request, where the document is a bound text or a single article over 50 pages, the request may be met by providing copies of those pages that provide the relevant subject matter. Specifically, Examiner requests the two documents mentioned above as missing:
12. “Non-Linear Multi-Variate Analysis-Approach by Neural Network”, Hideki Toyota, p. 11-13 and pp. 162-166, published by Asakura Book Store in 1996; and
13. “Empirical Model-Building and Response Surfaces, Box and Draper, published by John Wiley & Sons, New York.

Specification-objections-multiple pages and interview

14. **The disclosure is objected to because of the following there are two pages numbered 83, two numbered 84, and two numbered 85.** Examiner notes that these pages are not quite

Art Unit: 2123

identical, for example, the first page 83 states "a recording medium" in contrast to the second page 83 which states "a storage medium".

15. Additionally, the requested amendments to eliminate multiple dependent claims have been incorporated on one page 83, one page 84, and one page 85.

16. Further, a handwritten note by previous examiner Richard Pecone states: "Talked to Jack Sear on 3/25/02 representing Neil Siegal and he said use the storage medium in the preamble to the claims 15 to 19 instead of the recording medium". These instructions will be followed by the new Examiner Eduardo Garcia-Otero, thus giving full faith and credit to the prior examiner MPEP 704.01. An interview form based on this handwritten note has been prepared and accompanies this action.

17. Thus, to summarize: the multiple dependent claims have been eliminated, and the phrase "a storage medium" is used for Claims 15-19. The examiner requests clean copies incorporating these changes.

Specification-objections-incorporation of essential material-other

18. **The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper.** Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973). Also see MPEP 608.01(p).

Art Unit: 2123

19. These six attempts to incorporate essential material by reference are improper because they are not pending or issued US Patent:

20. First, Page 2 line 9, "International Publication No. WO94/16877".

21. Second, Page 16 line 19, "Hideki Toyota "Non-linear Multi-Variate Analysis-Approach by Neural Network" pages 11 to 13 and pages 162 to 166, published by Asakura Book Store in 1996".

22. Third, Page 39 line 19, "Box and Draper; Empirical Model Building and Response Surfaces, by Jogn Wiley & Sons, New York."

23. Fourth, Page 53 line 6, ""Genetic Algorithm" compiled by Hiroaki Kitano".

24. Fifth, Page 55 second full paragraph, ""Genetic Algorithm" compiled by Hiroaki Kitano".

25. Sixth, Page 71 line 10, ""Optimum Experimental Designs" by A.A.Atkinson and A.N.Donev oxford science Publications. pp 106".

Claim Numbering

26. **Consecutive numbering of the claims is required by 37 CFR 1.126.** There are two claims each of Claims 15 through 19. See the above section titled: "Specification-objections-multiple pages and interview" for details.

Claim Rejections - 35 USC § 112- first paragraph- description

27. The following is a quotation of the first paragraph of 35 U.S.C. 112:

- i. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

28. **Claim 1-19 are rejected under 35 U.S.C. 112, first paragraph**, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

29. **Specifically, Claim 1 states “determine a conversion system”**, which is not described in such a way as to convey possession of the claimed invention. Claims 2-8 depend from Claim 1, and inherit this defect. Claim 9 is a product claim, Claims 10-14 are apparatus claims, and Claims 15-19 are storage medium claims with the same defect, thus are rejected for the same reason.

Claim Rejections - 35 USC § 112- first paragraph- enablement

30. The following is a quotation of the first paragraph of 35 U.S.C. 112:

- a. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

31. **Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph**, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

32. **Specifically, Claim 1 states “determine a conversion system”**. The specification does not adequately describe “determine a conversion system” in such a way as to enable one skilled in the art to make and/or use the invention. Claims 2-8 depend from Claim 1, and inherit this defect. Claim 9 is a product claim, Claims 10-14 are apparatus claims, and Claims 15-19 are storage medium claims with the same defect, thus are rejected for the same reason.

Claim Interpretation

33. The claim language is interpreted in light of the specification. Limitations from the specification must not be imported into the claims, but definitions from the specification must be imported into the claims.

34. An exact transcription of a handwritten note by Richard Pecone follows: "Talked to Jack Sear on 3/25/02 representing Neil Siegal and he said use the storage medium in the preamble to the Claims 15 to 19 instead of the recording medium". These instructions will be followed by the new Examiner, Eduardo Garcia-Otero, thus giving full faith and credit to the prior examiner according to MPEP 704.01. An interview form based on this handwritten note has been prepared and accompanies this action. Thus, in Claims 15 to 19, the Examiner hereby interprets "recording medium" as meaning "storage medium".

35. Additionally, there is problematic language in many of the dependent claims with respect to the nature of the dependency. This language is carefully analyzed and interpreted below in the rejections of the dependent Claims 2-9.

Claim Rejections - 35 USC § 102(e)

36. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

b. A person shall be entitled to a patent unless –

c. (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

37. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined

Art Unit: 2123

was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

38. **Claims 1-6 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa et al. US Patent 5,710,718.**

39. **Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa '718.** Claim 1 is an independent claim with 3 limitations.

40. First, **"conversion system...design parameters...design performance"** is disclosed by Kamegawa '718 FIG 2 element 102 "DETERMINE OBJECTIVE FUNCTION, CONSTRAINT, AND DESIGN VARIABLE".

41. Second, **"objective function...setting a constraint"** is disclosed by Kamegawa '718 FIG 2 element 102 "DETERMINE OBJECTIVE FUNCTION, CONSTRAINT, AND DESIGN VARIABLE".

42. Third, **"optimum value of the objective function"** is disclosed by Kamegawa '718 FIG 2 element 116 "HAS THE VALUE OF THE OBJECTIVE FUNCTION CONVERGED?".

43. **Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa '718.** Claim 2 depends from Claim 1 ("according to claim 1").

44. Claim 2 further states "wherein said step (c) comprises". Note that 35 USC 112 fourth paragraph states "a claim in dependent form shall...specify a further limitation...[and] incorporate by reference all the limitations of the claim to which it refers." Technically, a dependent claim cannot replace a portion of it's antecedent claim, but rather can only specify further limitations. In the spirit of compact patent prosecution, the Examiner hereby interprets

Art Unit: 2123

Applicant's "wherein said step (c) comprises" to mean "wherein said step (c) **further** comprises".

45. However, the Examiner fails to find any additional limitations (or any substantial difference) in the step (c) of dependent Claim 2 in comparison with the step (c) of independent Claim 1.

46. Thus, Claim 2 is rejected for the same reasons as Claim 1.

47. Additionally, Applicant is advised that should Claim 1 be found allowable, then Claim 2 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

48. **Claim 3 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa '718.** Claim 3 depends from Claim 2 ("according to claim 2").

49. Claim 3 further states "wherein said step (c) comprises". Note that 35 USC 112 fourth paragraph states "a claim in dependent form shall...specify a further limitation...[and] incorporate by reference all the limitations of the claim to which it refers." Technically, a dependent claim cannot replace a portion of its antecedent claim, but rather can only specify further limitations. In the spirit of compact patent prosecution, the Examiner hereby interprets Applicant's "wherein said step (c) comprises" to mean "wherein said step (c) **further** comprises".

50. Thus, Claim 3 depends from Claim 2 and contains two additional limitations, and is rejected for the same reasons plus these additional reasons:

Art Unit: 2123

51. First, “sensitivity of the objective function” is disclosed by Kamegawa ‘718 FIG 2 element 112 “CALCULATE SENSITIVITY FOR EACH DESIGN VARIABLE”.

52. Second, “calculating a value of the objective function when the design variable is changed to correspond to a predicted amount and a value of the constraint condition when the design variable is changed” is disclosed by Kamegawa ‘718 FIG 2 element 110 “CALCULATE THE VALUE OF THE OBJECTIVE FUNCTION IN THE DETERMINED TIRE SHAPE AND CALCULATE THE VALUE OF THE CONSTRAINT”.

53. **Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa ‘718.** Claim 4 depends from Claim 1 (“according to claim 1”).

54. Claim 4 further states “wherein said step (c) comprises the steps of (d) selecting...” Note that 35 USC 112 fourth paragraph states “a claim in dependent form shall...specify a further limitation...[and] incorporate by reference all the limitations of the claim to which it refers.” Technically, a dependent claim cannot replace a portion of it’s antecedent claim, but rather can only specify further limitations. In the spirit of compact patent prosecution, the Examiner hereby interprets Applicant’s “wherein said step (c) comprises the steps of (d) selecting...” to mean “wherein said claim 1 **further** comprises: (d) selecting...”

55. Thus, Claim 4 depends from Claim 1 and contains three additional limitations, and is rejected for the same reasons plus these additional reasons:

56. First, “(d) selecting, as a design variable, one of the design parameters included in the conversion system” is disclosed by Kamegawa ‘718 FIG 2 element 102 “DETERMINE OBJECTIVE FUNCTION, CONSTRAINT, AND DESIGN VARIABLE”.

Art Unit: 2123

57. Second, **“(e) changing a value of the design variable...until the optimum value of the objective function is given”** is disclosed by Kamegawa ‘718 FIG 2 element 116 **“HAS THE VALUE OF THE OBJECTIVE FUNCTION CONVERGED?”**.

58. Third, **“(f) designing a tire...design variable which gives the optimum value of the objective function”** is disclosed by Kamegawa ‘718 FIG 2 element 116 **“HAS THE VALUE OF THE OBJECTIVE FUNCTION CONVERGED?”**.

59. **Claim 5 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa ‘718.**

Claim 5 depends from Claim 4 (“according to claim 4”).

60. Claim 5 further states “wherein said step (b) comprises...”. Note that 35 USC 112 fourth paragraph states “a claim in dependent form shall...specify a further limitation...[and] incorporate by reference all the limitations of the claim to which it refers.” Technically, a dependent claim cannot replace a portion of it’s antecedent claim, but rather can only specify further limitations. In the spirit of compact patent prosecution, the Examiner hereby interprets Applicant’s “wherein said step (b) comprises...” to mean “wherein said step (b) **further** comprises”.

61. Thus, Claim 5 depends from Claim 4 and contains one additional limitation, and is rejected for the same reasons plus these additional reasons:

62. **“a constraint condition”** is disclosed by Kamegawa ‘718 FIG 2 element 102 **“DETERMINE OBJECTIVE FUNCTION, CONSTRAINT, AND DESIGN VARIABLE”**.

63. **Claim 6 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa ‘718.**

Claim 6 depends from Claim 4 (“according to claim 4”).

64. Claim 6 further states “wherein said step (e) comprises...”. Note that 35 USC 112 fourth paragraph states “a claim in dependent form shall...specify a further limitation...[and] incorporate by reference all the limitations of the claim to which it refers.” Technically, a dependent claim cannot replace a portion of it’s antecedent claim, but rather can only specify further limitations. In the spirit of compact patent prosecution, the Examiner hereby interprets Applicant’s “wherein said step (e) comprises...” to mean “wherein said step (e) **further** comprises”.

65. Thus, Claim 6 depends from Claim 4 and contains three additional limitation, and is rejected for the same reasons plus these additional reasons:

66. First, “**sensitivity of the objective function**” is disclosed by Kamegawa ‘718 FIG 2 element 112 “CALCULATE SENSITIVITY FOR EACH DESIGN VARIABLE”.

67. Second, “**value of the objective function when the design variable is changed**” is disclosed by Kamegawa ‘718 FIG 2 element 110 “CALCULATE THE VALUE OF THE OBJECTIVE FUNCTION IN THE DETERMINED TIRE SHAPE, AND CALCULATE THE VALUE OF THE CONSTRAINT”.

68. Third, “optimum value of the objective function” is disclosed by Kamegawa ‘718 FIG 2 element 116 “HAS THE VALUE OF THE OBJECTIVE FUNCTION CONVERGED”.

69. Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa ‘718.

70. Claim 7 depends from Claim 1 (“according to claim 1”). Claim 7 further states “wherein said step (c) comprises the steps...” Note that 35 USC 112 fourth paragraph states “a claim in dependent form shall...specify a further limitation...[and] incorporate by reference all the limitations of the claim to which it refers.” Technically, a dependent claim cannot replace a

Art Unit: 2123

portion of it's antecedent claim, but rather can only specify further limitations. In the spirit of compact patent prosecution, the Examiner hereby interprets Applicant's "wherein said step (c) comprises the steps..." to mean "wherein said claim 1 **further** comprises the steps..."

71. Thus, Claim 7 depends from Claim 1 and contains nine additional claims, and is rejected for the same reasons plus these additional reasons:

72. First, "**plurality of base models**" is disclosed by Kamegawa '718 FIG 29A element 204 "CALCULATE INITIAL VALUES OF OBJECTIVE FUNCTION AND CONSTRAINT OF N MODELS".

73. Second, "**adaptive function**" is disclosed by Kamegawa '718 FIG 29A element 216 "TO BE MUTATED?".

74. Third, "**intersecting the design variables**" is disclosed by Kamegawa '718 FIG 29A element 210 "TO BE INTERSECTED?"

75. Fourth, "**obtaining an objective function...by changing the design variable**" is disclosed by Kamegawa '718 FIG 29B element 204 "CALCULATE OBJECTIVE FUNCTION AND CONSTRAINT OF TWO MODELS DETERMINED".

76. Fifth, "**storing the base models**" is disclosed by Kamegawa '718 FIG 29A element 202 "DETERMINE OBJECTIVE FUNCTION, CONSTRAINT, AND DESIGN VARIABLES OF N TIME MODELS".

77. Sixth, "**repeating the storing step until the number of stored base models reaches a predetermined number**" is disclosed by Kamegawa '718 FIG 29A element 202 "DETERMINE OBJECTIVE FUNCTION, CONSTRAINT, AND DESIGN VARIABLES OF N TIRE MODELS".

Art Unit: 2123

78. Seventh, **“predetermined convergence condition”** is disclosed by Kamegawa FIG 29B element 230 **“CONVERGE?”**.

79. Eighth, **“repeated until”** is disclosed by Kamegawa FIG 29B element 230 **“CONVERGE?”**.

80. Ninth, **“if the predetermined convergence conditions satisfied, designing a tire...optimum value of the objective function”** is disclosed by Kamegawa ‘718 FIG 29B element 232 **“DETERMINE TIRE CONFIGURATION”**.

81. **Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa ‘718.** Claim 9 is an independent claim for a product **“A tire which is formed according to design parameters designed by a tire design method according to Claim 1.”**

82. Claim 9 is a product claim with the same limitations as method Claim 1, and thus is rejected for the same reasons as Claim 1 above.

83. **Claims 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa ‘718.** Claims 10-13 are apparatus claims (**“An optimization analyzing apparatus”**) with the same limitations as method Claims 1-7, and therefore are rejected for the same reasons as Claims 1-7 above.

84. **Claims 15-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamegawa ‘718.** Claims 15-19 are **“storage medium”** claims with the same limitations as method Claims 1-7, and therefore are rejected for the same reasons as Claims 1-7 above.

Claim Rejections - 35 USC § 103

85. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

86. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

87. **Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamegawa et al US Patent 5,710,718 in view of Tang US Patent 6,061,673.**

88. **Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamegawa et al US Patent 5,710,718 in view of Tang US Patent 6,061,673.**

89. Claim 8 depends from Claim 1 with one additional limitation, and is rejected for the same reasons plus these additional reasons:

90. All of the limitations from Claim 1 are disclosed by Kamegawa '718 as discussed above in the 35 U.S.C 102(e) rejection above.

91. Kamegawa '718 does not expressly disclose "multi-layered feed forward type neural network".

92. **"multi-layered feed forward type neural network"** is disclosed by Tang '673 at FIG 5, and at Column 10 line 8 "system shown in FIG. 5 is a multi-layered feed forward network".

93. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tang '673 to modify Kamegawa '718. One of ordinary skill in the art would have been motivated to do this to "obtain specified learning effects during a very short learning period" according to Tang '673 at Column 13 line 59.

94. **Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kamegawa et al US Patent 5,710,718 in view of Tang US Patent 6,061,673.**

95. Claim 14 depends from Claim 10 with one additional limitation, and is rejected for the same reasons plus these additional reasons:

96. All of the limitations from Claim 10 are disclosed by Kamegawa '718 as discussed above in the 35 U.S.C. 102(e) rejection above.

97. Kamegawa '718 does not expressly disclose "multi-layered feed forward type neural network".

98. **"multi-layered feed forward type neural network"** is disclosed by Tang '673 at FIG 5, and at Column 10 line 8 "system shown in FIG. 5 is a multi-layered feed forward network".

99. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use Tang '673 to modify Kamegawa '718. One of ordinary skill in the art would have been motivated to do this to "obtain specified learning effects during a very short learning period" according to Tang '673 at Column 13 line 59.

Conclusion

100. The following US patents or publications are hereby made of record as prior art and cited:

Art Unit: 2123

101. Chen US Patent 5,226,092 discloses multi-layered feed forward neural networks.

Applicant should review this patent carefully before responding to this office action.

102. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eduardo Garcia-Otero whose telephone number is 703-305-0857. The examiner can normally be reached on Monday through Thursday from 9:00 AM to 7:00 PM.

103. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached at (703) 305-9704. The fax phone numbers for this group are:

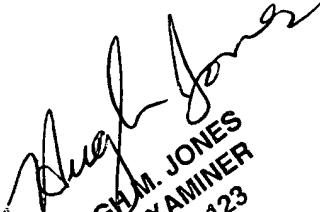
104. (703) 746-7238 --- for communications after a Final Rejection has been made;

105. (703) 746-7239 --- for other official communications; and

106. (703) 746-7240 --- for non-official or draft communications.

107. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.

* * * *


DR. HUGH M. JONES
PATENT EXAMINER
ART UNIT 2123